

PATENT

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Daniel J. Woodruff, Kyle M. Hanson, Thomas L. Oberlitner,  
LinLin Chen, John M. Pedersen and Vladimir Zila

Filed : October 30, 2001

For : METHODS AND APPARATUS FOR PROCESSING THE  
SURFACE OF A MICROELECTRONIC WORKPIECE

Docket No. : 291958025US6

PRIOR APPLICATION

Application No. : 09/386,610

Filing Date : August 31, 1999

Examiner : Erica Smith-Hicks

Art Unit : 1741

Box Patent Application  
Commissioner for Patents  
Washington, DC 20231

PRELIMINARY AMENDMENT

Dear Commissioner:

Please amend the subject application as follows:

In the Title:

Please change the title to:

METHODS AND APPARATUS FOR PROCESSING THE SURFACE OF A  
MICROELECTRONIC WORKPIECE

In the Specification: line before "BACKGROUND OF THE INVENTION",  
On page 1, line 5, please delete the "CROSS-REFERENCE TO RELATED  
APPLICATIONS" and insert the following:

## CROSS REFERENCE TO RELATED APPLICATIONS

This application is a continuation of U.S. Patent Application No. 09/386,610, filed August 31, 1999, and issued on October 30, 2001, as U.S. Patent No. 6309524; which is a continuation of International PCT Patent Application No. PCT/US99/15847, filed in the English language on July 12, 1999; which claims priority from U.S. Patent Application Serial No. 09/113,723, filed July 10, 1998, U.S. Provisional Application Serial No. 60/111,232, filed December 7, 1998, and U.S. Provisional Application Serial No. 60/119,668, filed February 11, 1999.

### In the Claims:

Please cancel claims 20-26, 41 and 42.

## REMARKS

Claims 1-19 and 27-40 are presently pending in the subject application. Claims 20-26, 41 and 42 have been cancelled. No new matter has been added by way of this amendment.

1. A reactor for plating a metal onto a surface of a workpiece comprising:  
a reactor bowl including an electroplating solution disposed therein;  
an anode disposed in the reactor bowl in contact with the electroplating solution;

a contact assembly spaced from the anode within the reactor bowl the contact assembly including

a plurality of contacts disposed to contact a peripheral edge of the surface of the workpiece, the plurality of contacts executing a wiping action against the surface of the workpiece as the workpiece is brought into engagement therewith, and

a barrier disposed interior of the plurality of contacts and including a member disposed to engage the surface of the workpiece to effectively isolate the plurality of contacts from the electroplating solution.